

CLAIMS

What is claimed is:

1. A machine for making pouches from a webbed film material and filling said pouches with a product comprising:
 - 5 a. a support structure on said machine for holding a pair of rolls of said film material;
 - b. an apparatus for gripping and unrolling film from each of said rolls such that a pair of continuous sheets of film are brought into close proximity with each other along a path through said machine;
 - 10 c. a plurality of dispensers for inserting product into the pouches as they are being formed;
 - d. a first station capable of reciprocating movement along the path of said film through said machine, said first station supporting a plurality of pairs of opposing closable heat sealing members for imparting a plurality of longitudinal seals upon said pair of sheets of film to bond said sheets together along each of said seals;
 - 15 e. a plurality of blades disposed along said path, each such blade being aligned with one of said longitudinal heat sealing members of said first station for separating said sealed film sheets into longitudinal tubular strips;
 - f. a second station capable of reciprocating movement along the path of said film through said machine, said second station supporting a pair of opposing closable heat sealing members for imparting transverse seals at spaced intervals upon said pair of sheets of film to bond said sheets together along each of said seals; and

g. a third station capable of reciprocating movement along the path of said film through said machine, said third station supporting a blade assembly for cutting across the centers of said transverse seals.

5 2. The machine of claim 1 wherein each of said first, second and third stations is capable of cyclical reciprocating movement along said path that is independent from the reciprocating movement of each of the other of said stations.

10 3. The machine of claim 1 wherein said gripping apparatus comprises a pair of moveable parallel shafts, each shaft supporting a plurality of rollers at spaced intervals defining a plurality of pairs of opposing rollers positioned in alignment with said longitudinal heat sealing members of said first station.

15 4. The machine of claim 3 wherein a plurality of dispensing tubes are provided in operative communication with said dispensers, each of said tubes extending between said sheets of film and through the spaced intervals between the plurality of pairs of rollers.

20 5. The machine of claim 4 wherein a reservoir of product is provided, and said dispensers include a plurality of pumps for removing measured quantities of product from said reservoir and transferring said quantities through said dispensing tubes into said pouches as they are being formed.

6. The machine of claim 1 wherein said transverse seals are perpendicular to said longitudinal seals.

7. The machine of claim 1 wherein said plurality of blades are provided downstream from said longitudinal heat sealing members.

8. The machine of claim 1 wherein said film support structure is provided on a side of said machine, and a plurality of guides are provided adjacent to said support structure to align and bring the sheets of film from each roll into close parallel proximity with each other prior to entering the machine.

5 9. An apparatus for manufacturing and filling webbed pouches comprising:

10 a. a support means for holding a pair of rolls of webbed film material;
b. a pulling means for gripping and unrolling sheets of webbed film from each of said rolls;

c. a plurality of dispensing means for inserting product into the pouches as they are being formed;

15 d. a first sealing means capable of reciprocating movement along the path of said film through said apparatus for imparting a plurality of longitudinal seals upon said sheets of film to bond said sheets together along each of said seals;

e. a plurality of cutting means disposed along said path for separating said sealed film sheets into longitudinal tubular strips;

20 f. a second sealing means capable of reciprocating movement along the path of said film through said apparatus for imparting transverse seals at spaced intervals upon said pair of sheets of film to bond said sheets together along each of said seals; and

g. a transverse cutting means capable of reciprocating movement along the path of said film through said apparatus for cutting across the centers of said transverse seals.

10. The apparatus of claim 9 wherein said first sealing means, said second sealing means and said transverse cutting means are each capable of cyclical reciprocating movement along said path that is independent from the reciprocating movement of each of the other of said means.

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11. The apparatus of claim 9 wherein said pulling means brings a pair of continuous sheets of film from said rolls into close proximity with each other along a path through said apparatus.

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12. The apparatus of claim 9 wherein said first sealing means supports a plurality of pairs of opposing closable heat sealing means, and each of said cutting means is aligned with one of said pairs of closable means.

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13. The apparatus of claim 12 wherein said pulling means comprises a pair of moveable parallel shaft means, each shaft supporting a plurality of roller means at spaced intervals defining a plurality of pairs of opposing roller means positioned in alignment with said heat sealing means.

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14. The apparatus of claim 13 wherein a plurality of dispensing tube means are provided in operative communication with said dispensing means, each of said tube means extending between said sheets of film and through the spaced intervals between the plurality of pairs of roller means.

15. The apparatus of claim 14 wherein a reservoir of product is provided, and said dispensing means include a plurality of pump means for removing measured quantities of product from said reservoir and transferring said quantities through said tube means into said pouches as they are being formed.

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16. The apparatus of claim 9 wherein said transverse seals are perpendicular to said longitudinal seals.

10 17. A method for continuously forming and filling sealed pouches from webbed film material comprising the steps of:

15 a. unrolling sheets of said webbed film from a pair of rolls, and guiding said sheets so that they travel in a parallel relationship in close proximity to each other along a path;

20 b. forming at least two continuous longitudinal seals along said film sheets such that said sheets are bonded together at said seals using a first moveable sealing apparatus that is capable of reciprocating movement along the path of said film;

c. cutting said sealed film sheets into strips along said longitudinal seals;

25 d. forming cross seals at pre-determined intervals on said film sheets such that said sheets are bonded together at said cross seals using a second moveable cross sealing apparatus that is capable of reciprocating movement along the path of said film;

30 e. inserting a measured quantity of product material between the film sheets and between said longitudinal seals following the formation of each cross seal; and

f. cutting said film along each of said cross seals using a second cutting apparatus that is capable of reciprocating movement along the path of said film.

18. The method of claim 17 wherein said first moveable sealing apparatus, said second moveable sealing apparatus and said second cutting apparatus are each capable of reciprocating movement along said path that is independent from the reciprocating movement of each of the other of said apparatus.

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19. The method of claim 17 wherein said cross seals are perpendicular to said longitudinal seals.

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20. The method of claim 17 wherein said film sheets are cut into strips along said longitudinal seals using a plurality of blades located downstream from said first moveable sealing apparatus.